

## **REMARKS**

Applicants respectfully request consideration of the subject application as amended herein. This Amendment is submitted in response to the Office Action mailed May 21, 2007. Claims 1-50 stand rejected. In this amendment, claims 1, 6, 9, 15, 18, 21, 27, 30, 36, 44, and 46-50 have been amended. Claims 2, 3, 7, 10-14, 16, 19, 20, 22-24, 28, 31-35 and 37-43 have been canceled. Claims 51 and 52 have been added. No new matter has been added.

### **Summary of Rejections under 35 U.S.C. §103**

The Examiner rejected claims 1-6, 13, 15-16, 21-22, 23-27, 34, 36-37, 42, 44 and 46-50 under 35 U.S.C. §103(a) as being unpatentable over Chacon, (U.S. Patent No. 6,128,588, hereinafter “Chacon”), in view of Floyd, et al. (U.S. Patent Application No. 2002/0105355, hereinafter “Floyd”).

Claims 7-12, 14, 28-33 and 35 are rejected under 35 U.S.C. §103(a) as being unpatentable over Chacon, in view of Floyd, as applied to claims 1-6, 13, 15-16, 21-22, 23-27, 34, 36-37, 42, 44 and 46-50 above, in view of Beauchesne, (U.S. Patent No. 5,777,876, hereinafter “Beauchesne”).

Claims 17-20, 38-41, 43 and 45 are rejected under 35 U.S.C. §103(a) as being unpatentable over Chacon, in view of Floyd, as applied to claims 1-6, 13, 15-16, 21-22, 23-27, 34, 36-37, 42, 44 and 46-50 above, in view of Martorana, et al., (U.S. Patent Application No. 2003/0236628, hereinafter “Martorana”).

### **Claims 7-12, 14, 28-33 and 35**

The Examiner rejected claims 1-6, 13, 15-16, 21-22, 23-27, 34, 36-37, 42, 44 and 46-50 under 35 U.S.C. §103(a) as being unpatentable over Chacon in view of Floyd. As amended,

claim 1 recites:

A method of storing information in a database to characterize attributes outputted by different classes of equipment, comprising:  
providing a database memory device;  
storing in a first database table of the database memory device a plurality of attribute data records, wherein storing each attribute data record includes:  
storing in that record a first field identifying a class of equipment;  
storing in that record a second field identifying an attribute whose value is outputted by the class of equipment identified by the first field of that record, wherein said attribute is a sensor measurement or operating parameter of said class of equipment identified by said first field; and  
storing in that record a third field specifying an ID which the class of equipment identified by the first field of that record assigns to the attribute identified by the second field of that record; and  
**storing in a second database table that is a child table of the first database table a plurality of subordinate data records, wherein storing each subordinate data record includes:**  
**storing in the subordinate data record one or more subordinate fields that are subordinate to the second field of an attribute data record.**

(emphasis added).

Chacon teaches a scheduler database that stores production models for simulation as well as data extracted from a manufacturing execution system for the simulation. The stored information includes T1 parameters (parts, equipment type and equipment ID, and process routing information) and T2 parameters (WIP status and preventative maintenance task schedules and status), lot status, machine tact (time standard), and Kanban worksheets. (Chacon, column 2, line 66 to column 3, line 4; column 3, lines 61-65).

The scheduler database of Chacon *does not* store records having fields that can identify an attribute whose value is outputted by a class of equipment. The Examiner submits Chacon discloses, at col. 2, lines 24-29, storing in the record a second field, as claimed. Applicants respectfully disagree. Chacon discloses at col. 2, lines 24-29: "... if a process parameter and an equipment parameter... are entered, the system creates and suggests the time standard to use for

those times that are not likely to have large variations.” Thus, Chacon does not disclose the second field being output by the class of equipment. Instead, in Chacon, a user enters the process and equipment parameters and the system calculates time standards based on the entered data. In contrast, in embodiments of the present invention, the parameters are outputted by the mainframe, process chambers or instruments themselves. As a result, the relevant data does not need to be manually entered by maintenance personnel, as required in prior art systems, such as Chacon.

Chacon also fails to teach a subordinate database table that includes a record having subordinate fields that are subordinate to a field of a record in a parent table that can identify an attribute whose value is outputted by a class of equipment. In contrast, claim 1 includes, “storing in [a] record a second field identifying an attribute whose value is outputted by [a] class of equipment identified by [a] first field of that record,” and “storing in a second database table that is a child table of [a] first database table a plurality of subordinate data records, wherein storing each subordinate data record includes: storing in the subordinate data record one or more subordinate fields that are subordinate to the second field of an attribute data record.”

Floyd teaches a database 400 that includes a product table 410, a result table 430, a process table 450, and an equipment command and communication table 500. (Floyd, paragraph [0139]; Figures 12-14). However, none of these tables is a child table that includes records having one or more fields that are subordinate fields of a field in a record of the parent table that identifies an attribute whose value is outputted by a class of equipment. Therefore, Floyd fails to teach or suggest the limitations of claim 1 that are missing from Chacon.

Neither Chacon nor Floyd, alone or in combination, teach or suggest all of the

limitations of claim 1. Accordingly, applicants respectfully assert that claim 1 and its dependent claims are in condition for allowance, and request that the rejection under 35 U.S.C. 103(a) be removed.

Claims 21 and 44 include the language, "storing in that record a second field identifying an attribute whose value is outputted by the class of equipment identified by the first field of that record," and "wherein storing each subordinate data record includes: storing in the subordinate data record one or more subordinate fields that are subordinate to the second field of an attribute data record." As noted above, neither Chacon nor Floyd, alone or in combination, teach or suggest such limitations. Accordingly, the applicants respectfully assert that the present invention as claimed in claims 21 and 44, and their corresponding dependent claims, is patentable over the cited references.

#### Claims 7-12, 14, 28-33 and 35

Claims 7-12, 14, 28-33 and 35 are rejected under 35 U.S.C. §103(a) as being unpatentable over Chacon, in view of Floyd, as applied to claims 1-6, 13, 15-16, 21-22, 23-27, 34, 36-37, 42, 44 and 46-50 above, in view of Beauchesne.

Beauchesne teaches a database manufacturing process management system that includes a recipe table 220, a line list table 210, a product list table 200, a parameter table 230, a user table 240 and a history table 245. (Beauchesne, Figure 2a and 2b; col. 5, lines 23-37). However, none of the database tables of Beauchesne include records having fields that can identify an attribute whose value is outputted by a class of equipment. Moreover, none of the tables of Beauchesne are child tables of any of the other tables of Beauchesne. Therefore, Beauchesne does not teach a subordinate database table that includes a record having subordinate fields that are subordinate to a field of a record in a parent table that can identify an attribute whose value is outputted by a

class of equipment.

Beauchesne fails to teach or suggest the limitations of claims 1 and 21 that are missing from Chacon and Floyd. Therefore, none of Chacon, Floyd or Beauchesne, alone or in combination, teach or suggest all of the limitations of dependent claims 8, 9, 29, and 30, which include the limitations of their patently distinct parent claims. Accordingly, applicants respectfully request that Examiner remove his rejection under 35 USC 103(a).

Claims 17-20, 38-41, 43 and 45

Claims 17-20, 38-41, 43 and 45 are rejected under 35 U.S.C. §103(a) as being unpatentable over Chacon, in view of Floyd, as applied to claims 1-6, 13, 15-16, 21-22, 23-27, 34, 36-37, 42, 44 and 46-50 above, in view of Martorana.

The current Office Action states:

Chacon and Floyd teach the elements of claim 17 but do not explicitly teach “storing in that record a third field specifying a conversion parameter that defines a conversion of the value of the attribute identified in the second field into physical units of measure.”

However, Martorana discloses, “storing in that record a third field specifying a conversion parameter that defines a conversion of the value of the attribute identified in the second field into physical units of measure” as a system includes a thermal isolating chamber, an inertial measurement unit for making inertial measurements, and a temperature control system (Martorana, paragraph [0014]).

(Office Action, 5/21/2007, page 31).

Applicants respectfully disagree with the Office Actions assertions, and submit that Martorana does not teach or disclose the limitations of claim 17 that are missing from Chacon and Floyd. Martorana teaches a navigation system for a drilling rig. The navigation system **does not include a database**. Therefore, Martorana does not teach storing in a record of a database a third field specifying a conversion parameter that defines a conversion of the value of the

attribute identified in the second field into physical units of measure, as required by claim 17. If Office Action continues to assert that Martorana does include, “storing in that record a third field specifying a conversion parameter that defines a conversion of the value of the attribute identified in the second field into physical units of measure”, then Applicants respectfully request a clarifying explanation as to how the cited passages of Martorana can be so construed.

None of Chacon, Floyd or Martorana, alone or in combination, teach or suggest all of the limitations of claim 17. Accordingly, applications respectfully request that Examiner remove his rejection under 35 U.S.C. § 103(a) to claim 17 and its dependent claims.

Claims 38, 43 and 45 include the language, “storing in that record a third field specifying a conversion parameter that defines a conversion of the value of the attribute identified in the second field into physical units of measure.” As noted above, none of Chacon, Floyd, or Martorana, alone or in combination, teach or suggest such a limitation. Accordingly, the applicants respectfully assert that the present invention as claimed in claim 45, and its corresponding dependent claim, is patentable over the cited references.

**DEPOSIT ACCOUNT AUTHORIZATION**


Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due. Furthermore, if an extension is required, then Applicant hereby requests such extension.

If the Examiner determines the prompt allowance of these claims could be facilitated by a telephone conference, the Examiner is invited to contact Benjamin Kimes at (408) 720-8300.

Respectfully submitted,

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